

Science 1

Marks Simple Workable Difficult

Lesson 01 Gravitation

Gravitation				
Force & Motion				
Circular Motion & Centripetal force				
Kepler's Laws				
Newton's Universal Law of gravitation				
Earth's gravitational force				
Earth's gravitational acceleration				
Variation in Value of 'g'				
Mass & Weight				
Free Fall				
Gravitational Potential energy				
Escape Velocity				

Lesson 02 Periodic Classification of Elements

Classification of elements				
Dobereiner's Triads				
Newland's law of Octaves				
Mendeleev's Periodic table				
Merits of Mendeleev's periodic table				
Demerits of Mendeleev's periodic table				
Modern periodic law				
Structure of modern periodic table				
Periods & electronic configuration				
Period trends				
Atomic size				
Metallic - Non Metallic Character				

Lesson 03 Chemical Reactions and Equations

Chemical reactions and Equations				
Writing a chemical equation				
Balancing an equation				
Steps in balancing an equation				
Types: Combination reaction				
Decomposition reaction				
Displacement reaction				
Double displacement reaction				
Endothermic & Exothermic processes & reactions				
Factors affecting rate if chemical reactions				
Oxidation & Reduction				
Corrosion				
Rancidity				

Lesson 04 Effects of Electric current

Energy transfer in an electric current				
Heating effect of electric current				

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Magnetic effect of electric current				
Magnetic field produced by current through a circular loop				
Magnetic field due to current in a solenoid				
Fleming's left hand rule				
Electric motor				
Electromagnetic Induction				
Galvanometer				
Faraday's Law of Induction				
Fleming's right hand rule				
Alternating & Direct Current				
Electric Generator				

Lesson 05 Heat

Latent heat				
Anomalous behavior of water				
Regelation				
Dew point & humidity				
Unit of heat				
Specific heat capacity				
Heat Exchange				
Measurement of Specific heat & Calorimeter				

Lesson 06 Refraction of Light

Refraction of light				
Laws of refraction				
Refractive Index				
Twinkling of stars				
Dispersion of light				
Partial & Total internal reflection				

Lesson 07 Lenses

Lenses				
Images formed by convex lenses				
Images formed by concave lenses				
Sign Convention				
Lenses Formula				
Magnification				
Power of lens				
Combination of Lenses				
Human eye and working				
Defects of vision				
Apparent size of an object				
Use of lenses				
Persistence of vision				

Lesson 08 Metallurgy

Physical Properties of metals & non -metals				
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Chemical properties of metals & reaction with them				
Reactivity series of metals				
Chemical properties of non-metals				
Ionic compounds				
Properties of ionic compounds				
Metallurgy & occurrence of metals				
Basic principles: 1. Concentration of ores				
2. Separation based in gravitation				
3. Magnetic separation				
4. Froth floatation				
5. Leaching				
Extraction of metals				
Corrosion of metals				
Prevention of corrosion				

Lesson 09 Carbon Compounds

Bonds in Carbon compounds				
Carbon: a versatile element				
Hydrocarbons: Saturated or unsaturated				
Functional groups in carbon compounds				
Homologous series				
Nomenclature series of Carbon compounds				
IUPAC system of nomenclature				
Chemical properties				
Ethanol & Ethanoic acid				
Chemical properties of Ethanol & Ethanoic acid and their reactions				
Macro Molecules and polymers				

Lesson 10 Space Mission

Space Mission				
Artificial Satellites				
Need & importance of satellites				
orbits of artificial satellites				
High Earth orbits				
Medium Earth Orbits				
Low Earth Orbits				
Satellite Launch Vehicle				
Space Mission away from Earth				
India & Space technology				
Missions to other planets				
Moon & Mars Missions				
Space Debris & Its Management				

